LIST OF CURRENT CLAIMS

Claims 1-11 (Cancelled)

12(New). A method for measuring the intraocular pressure in an eye, the method comprising the steps of:

pressing a contact body with a known geometry against the eye with a force (F);

determining the area (A) of deformation of the eye;

calculating the pressure (P) from the correlation P=F/A;

reading the frequency characteristic (Δf_{char}) of the contact body associated with a sensor system oscillating in resonance;

pressing with a gradually increasing force (F) the contact body against the eye to cause change in the system oscillating in resonance;

continuously reading the contact force (F) and the frequency characteristic (Δf_{char}) for the system oscillating in resonance during deformation of the eye such that a series of measured values are obtained; and

determining the relationship between the change in frequency characteristic (Δf_{char}) and force (F) to thereby determine the pressure (P) of the eye since the deformation area (A) sought is a function of the change in frequency characteristic (Δf_{char}).

13(New). The method according to claim 12 wherein the force which the contact body is pressed against the eye is chosen depending on the pressure of the eye such that a lower pressure is determined with a lower contact force against the eye and a higher pressure is determined with a higher contact force, the high degree of measurement accuracy is obtained with a minimal contact force over a large pressure interval.

14(New). The method according to claim 12 wherein the frequency characteristic (Δf_{char}) is read continuously and the contact force (F) is increased until a desired change in the frequency characteristic (Δf_{char}) has been reached, the pressure (P) being determined as a function of the contact force (F) at a specified change of the frequency characteristic (Δf_{char}) .

15(New). The method according to claim 12 or 14 wherein repeated readings of the contact force (F) and the frequency characteristic (Δf_{char}) are made while the contact body is pressed against the eye such that a series of measurement values are obtained.

16(New). The method according to claim 12 wherein the frequency characteristic (Δf_{char}) is described by resonance frequency or a change in phase.

17(New). A device for measuring the intraocular pressure (P) in an eye, the device comprising:

a resonance oscillation system including a contact body (4) configured for pressing against an eye:

a reading device (9) connected to the resonance oscillation system and arranged to continuously read a frequency characteristic (Δf_{char}) of the system;

a measuring device (3) connected to the resonance oscillation system, and configured to continuously measure force with which the contact body is pressed against the eye;

a calculation device (11) connected to the reading device (9) and arranged to calculate the change in frequency characteristic (Δf_{char}); and

a feedback device (8) connected to the reading device (9) and the resonance oscillation system, and arranged to read a force (F) with which the contact body is pressed against an eye;

wherein the device determines the frequency characteristic (Δf_{char}) and the force (F) to determine the pressure (P) of an eye.

18(New). The device according to claim 17, wherein the resonance oscillation system includes a piezo-electric element.

19(New). The device according to claim 17 or 18 wherein the contact body (4) has a flat contact surface (5) having a structure or a pattern.

20(New). The device according to claim 17 or 18 wherein the contact surface (5) is concave having a radius that exceeds the radius of the curvature of the surface of an eye against which it is intended to be pressed.